Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

October 5, 2001

Mr. John Cherry
Kennecott Utah Copper Corporation
P.O. Box 6001
Magna, Utah 84044-6001

Re: Response Comments, Kennecott Utah Copper Corporation, Groundwater Extraction and Treatment Remedial Project, Bingham Mine, M/035/002, Salt Lake County, Utah

Dear Mr. Cherry:

The following questions and responses have been formatted to help both of us keep track of our comments. Our most recent responses are bolded.

7) *Section 5.2 Groundwater Extraction, page 11: The Division of Oil, Gas and Mining (DOGM) would like to point out that pumping of the shallow wells may reduce the amount of ground water normally flowing into the Jordan River. Allowable concentrations of Coca's, proposed for discharge from the treatment facilities into the Jordan River, appear to be based on normal flow volumes. Please explain if allowable discharge concentrations of Coca's take into consideration the potentially reduced volume of surface water in the river from the shallow well extraction.*

JVWCD Response:
The water right change applications which provide for the shallow wells to be pumped also provide for the Utah Lake water that was historically released to the canals, which ultimately seeped to the Jordan River, to be released from Utah Lake directly to the Jordan River during pumping of the wells. Thus the Jordan River flow rates will not be reduced. The water right change application for this project, under water right No. 59-5513 (a23590) has been approved by the State Engineer.

DOGM determines this response to be adequate and no further comment is required at this time.

9) *Section 5.4 Water Treatment Plants, page 12: The Zone-A treatment plant and associated pipelines will be built on ground owned by KUCC. The facility will need to be included in the DOGM reclamation bond for the Bingham Canyon Mine.*

KUCC Response:
There are several reasons why the Zone A treatment plant and associated pipelines will not need to be included in DOGM permitting and bonding. The Zone A RO plant serves a dual purpose, - both to meet the objectives of the NRD and to complete part of the CERCLA remediation (containing the plume). To the extent that any of these facilities are located on-site and are part of a CERCLA remedy, they are

exempt from federal and state permitting requirements pursuant to CERCLA section 121(e)(1), which provides: *"No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section."*

Additionally, the RO water treatment to make municipal quality water is not a "mining operation" as that term is defined in UCA 40-8-4(8) which states, *"mining operation means those activities conducted on the surface of the land for the exploration for, development of, or extraction of a mineral deposit, including, but not limited to, surface mining and the surface effects of underground and in situ mining, on-site transportation, concentrating, milling evaporation, and other primary processing."* Nevertheless, the Zone A reverse osmosis treatment plant already meets the objectives of the mined land reclamation act which is *"to return the land .... to a stable ecological condition compatible with past, present, and probable future local land uses."* Utah Code Ann. 40-8-12. The RO treatment plant, including building and skids and the pipeline that will take drinking water to the JVWCD's Zone C Reservoir, will be transferred to the JVWCD at a future date providing water to the Jordan Valley residents long into the future. There is no question that providing drinking water to the public is consistent with local land uses.

DOGM determines this response does not provide for any specific long term maintenance and reclamation assurances from JVWCD. The Division requests this confirmation in the form of a letter from JVWCD.

15) *Section 5.6 Concentrate Disposal, pages 14 – 17: The greater flow of tailings slurry, which is anticipated to stabilize the corrosive and precipitating nature of the concentrate streams, will only be present during active mining operations. The scenario of the concentrate streams and post mining flow in the tailings line should also be discussed.*

KUCC Response:
As noted in response to comment No. 13, the RD will include a study of various treatment and concentrate disposal options for the post-mining period.

Disposal of concentrates into the KUCC tailings impoundment is also subject to regulation by DOGM under the Minerals Rules of the Utah Mined Land Reclamation Act, under permit number M/035/015. The impacts of concentrate disposal in this facility (during active mining and after mine closure) on the currently approved reclamation plan will need to be discussed and the reclamation plan amended, as needed.

KUCC Response:
A study that addresses short and long-term geochemical impacts on the tailings system is included in the RD. Additionally, KUCC's continual acidification research and operational monitoring as required under permit M/035/015 and Groundwater Discharge Permit UGW350011 allow for monitoring of variations in the chemistry of tailings inflows. The current reclamation surety estimate for the tailings impoundment includes the surface application of approximately 50 tons per acre of limestone equivalent to 35% of the embankment surface. Should the continual research demonstrate that long-term erosional and vegetative stability of the tailings embankment is improved or hampered by the disposal of concentrates into the

tailings impoundment and an adjustment in tailings surface treatment is required, an amendment to the approved mining and reclamation plan and adjustment to surety estimate would occur.

DOGM considers this response to be inadequate given that the studies identified don't necessarily address all the bonding and permitting concerns at this point in time. Please provide more detail regarding the timing for implementation of those studies identified in the Remedial Design Work Plan for Geochemical Investigations: Tailings Disposal System. The Division realizes that all the geochemical answers are not available at this time and the Division is willing to be somewhat flexible in regards to addressing those timeframes. It is understood that the possible liming of the embankments was included in the impoundment bond estimate, but this liming was not necessarily to the internal surface areas of the impoundment. Therefore, an assessment of the long term effects / impacts to final reclamation success of the internal impoundment areas is also necessary.

21) Section 13.4 KUCC/JVWCD Agreement ("the Project Agreement"), pages 44 – 45: Please explain if, when ownership of the Zone-A plant and associated waste stream pipelines is passed to JVWCD, the DOGM bonding responsibilities for those facilities will be transferred also.

KUCC Response:
As indicated in the response to item #9, the Zone A plant is 1) part of a CERCLA remedy, and 2) is a treatment facility that will provide culinary water to the public post-mining and as such does not fall under the definition of a "mining operation" subject to DOGM reclamation and bonding requirements. Therefore KUCC does not intend to post a reclamation bond for the facility and thus no such bonding responsibilities would be transferred to the JVWCD.

DOGM considers this response to be partially acceptable. Once DOGM receives a letter from JVWCD clarifying long term responsibility regarding the maintenance and liability of this treatment facility, we are willing to accept this response as adequate.

22) Section 14.1 Zone A 4th paragraph, page 46 : Please explain in this section where the lime-treatment sludge from the Zone A RO plant will be disposed of after mine closure.

KUCC Response:
Should it be necessary to condition the water to adjust the pH for treatment, KUCC will characterize and identify appropriate disposal options.

DOGM asks KUCC how this characterization will take place and how the disposal sites will be chosen. What criteria will be used. It is still DOGM's position that the disposal site(s) will need to be permitted.

24) Section 16.0 Meeting USEPA CERCLA Requirements, pages 51 – 55: Use of the waste rock dumps for storage would preclude the closure of those areas impacted by the concentrate.

KUCC Response:
Comment is noted.

DOGM considers this response to be adequate if the term "comment is noted" means that reimpacting dump areas for disposal of concentrates will be considered by KUCC and appropriately permitted.

25) *Section 16.0 Meeting USEPA CERCLA Requirements, pages 51 – 55: Construction of a lined facility for concentrate disposal within a KUCC mine permit area would require a modification to the currently approved mine permit(s) with DOGM. This modification would be subject to DOGM review under the appropriate section(s) of the Minerals Rules.*

KUCC Response:
Permitting requirements, if any, will be reviewed for any option chosen for NF concentrate disposal. The Remedial Design Work Plan includes a permit analysis. However, it is KUCC's view that construction of such a repository would be part of a CERCLA remedial action. To the extent that such facilities are located on-site and are part of a CERCLA remedy, they are exempt from federal and state permitting requirements pursuant to CERCLA section 121(e)(1), which provides: "No Federal, State, or local; permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section."

DOGM considers this response to be inadequate since the Division considers Kennecott to be responsible for the site, if necessary, and also considers permitting of this disposal site appropriate.

26) *Section 16.0 Meeting USEPA CERCLA Requirements, pages 51 – 55: After mining ceases and the water treatment facilities continue to produce concentrates, please explain if the RO/NF concentrates will still be considered a byproduct of the former mining practices and therefore not subject to discharge limitations.*

KUCC Response:
The source of the RO/NF concentrate streams are a mining source. Thus to the extent any question is raised as to whether the NF would be characteristically hazardous, the Bevill exemption still applies.

RO/NF is subject to ore mining and dressing when being discharged with mine-related discharges. With respect to UPDES discharges, it appears that post-closure discharges would not be subject to the ore mining and dressing limitations, which pertain to active mining operations. While the post-mining RO/NF concentrate discharges to jurisdictional waters of the State would not be subject to the ore mining and dressing effluent limitation guidelines in 40 CFR Part 440, any such discharge would be subject to other applicable limitations consistent with the relevant permitting program.

DOGM considers this response inadequate until the responsibility of the impact from the concentrate streams are fully understood in relationship to permitted mine facilities (i.e. the tailings impoundment).

If you have any questions regarding this response please contact Tom Munson of our staff at 538-5321.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
cc: Doug Bacon, DEQ
KUCC-NRDS-ltr.doc